



SEQUENCE LISTING

<110> Gordon, Robert
Sprengel, Jorg
Yon, Jeffrey
Dijkmans, Josiena
Gosiewska, Anna
Dhanaraj, Sridevi
Xu, Jean

<120> Vascular Endothelial Growth Factor-X

<130> 51935/004

<140> US/09/869,198

<141> 2001-06-21

<150> GB 9828377.3

<151> 1998-12-22

<150> US 60/124,967

<151> 1999-03-18

<150> US 60/164,131

<151> 1999-11-08

<160> 97

<170> PatentIn Ver. 2.0

<210> 1

<211> 323

<212> PRT

<213> Homo sapiens

<400> 1

Glu Ser Asn Leu Ser Ser Lys Phe Gln Phe Ser Ser Asn Lys Glu Gln
1 5 10 15

Tyr Gly Val Gln Asp Pro Gln His Glu Arg Ile Ile Thr Val Ser Thr
20 25 30

Asn Gly Ser Ile His Ser Pro Arg Phe Pro His Thr Tyr Pro Arg Asn
35 40 45

Thr Val Leu Val Trp Arg Leu Val Ala Val Glu Glu Asn Val Trp Ile
50 55 60

Gln Leu Thr Phe Asp Glu Arg Phe Gly Leu Glu Asp Pro Glu Asp Asp
65 70 75 80

Ile Cys Lys Tyr Asp Phe Val Glu Val Glu Pro Ser Asp Gly Thr
85 90 95

Ile Leu Gly Arg Trp Cys Gly Ser Gly Thr Val Pro Gly Lys Gln Ile
100 105 110

Ser Lys Gly Asn Gln Ile Arg Ile Arg Phe Val Ser Asp Glu Tyr Phe
 115 120 125
 Pro Ser Glu Pro Gly Phe Cys Ile His Tyr Asn Ile Val Met Pro Gln
 130 135 140
 Phe Thr Glu Ala Val Ser Pro Ser Val Leu Pro Pro Ser Ala Leu Pro
 145 150 155 160
 Leu Asp Leu Leu Asn Asn Ala Ile Thr Ala Phe Ser Thr Leu Glu Asp
 165 170 175
 Leu Ile Arg Tyr Leu Glu Pro Glu Arg Trp Gln Leu Asp Leu Glu Asp
 180 185 190
 Leu Tyr Arg Pro Thr Trp Gln Leu Leu Gly Lys Ala Phe Val Phe Gly
 195 200 205
 Arg Lys Ser Arg Val Val Asp Leu Asn Leu Leu Thr Glu Glu Val Arg
 210 215 220
 Leu Tyr Ser Cys Thr Pro Arg Asn Phe Ser Val Ser Ile Arg Glu Glu
 225 230 235 240
 Leu Lys Arg Thr Asp Thr Ile Phe Trp Pro Gly Cys Leu Leu Val Lys
 245 250 255
 Arg Cys Gly Gly Asn Cys Ala Cys Cys Leu His Asn Cys Asn Glu Cys
 260 265 270
 Gln Cys Val Pro Ser Lys Val Thr Lys Lys Tyr His Glu Val Leu Gln
 275 280 285
 Leu Arg Pro Lys Thr Gly Val Arg Gly Leu His Lys Ser Leu Thr Asp
 290 295 300
 Val Ala Leu Glu His His Glu Glu Cys Asp Cys Val Cys Arg Gly Ser
 305 310 315 320
 Thr Gly Gly

<210> 2
 <211> 345
 <212> PRT
 <213> Homo sapiens

<400> 2
 Met Ser Leu Phe Gly Leu Leu Leu Thr Ser Ala Leu Ala Gly Gln
 1 5 10 15
 Arg Gln Gly Thr Gln Ala Glu Ser Asn Leu Ser Ser Lys Phe Gln Phe
 20 25 30
 Ser Ser Asn Lys Glu Gln Tyr Gly Val Gln Asp Pro Gln His Glu Arg
 35 40 45

Ile Ile Thr Val Ser Thr Asn Gly Ser Ile His Ser Pro Arg Phe Pro
 50 55 60
 His Thr Tyr Pro Arg Asn Thr Val Leu Val Trp Arg Leu Val Ala Val
 65 70 75 80
 Glu Glu Asn Val Trp Ile Gln Leu Thr Phe Asp Glu Arg Phe Gly Leu
 85 90 95
 Glu Asp Pro Glu Asp Asp Ile Cys Lys Tyr Asp Phe Val Glu Val Glu
 100 105 110
 Glu Pro Ser Asp Gly Thr Ile Leu Gly Arg Trp Cys Gly Ser Gly Thr
 115 120 125
 Val Pro Gly Lys Gln Ile Ser Lys Gly Asn Gln Ile Arg Ile Arg Phe
 130 135 140
 Val Ser Asp Glu Tyr Phe Pro Ser Glu Pro Gly Phe Cys Ile His Tyr
 145 150 155 160
 Asn Ile Val Met Pro Gln Phe Thr Glu Ala Val Ser Pro Ser Val Leu
 165 170 175
 Pro Pro Ser Ala Leu Pro Leu Asp Leu Leu Asn Asn Ala Ile Thr Ala
 180 185 190
 Phe Ser Thr Leu Glu Asp Leu Ile Arg Tyr Leu Glu Pro Glu Arg Trp
 195 200 205
 Gln Leu Asp Leu Glu Asp Leu Tyr Arg Pro Thr Trp Gln Leu Leu Gly
 210 215 220
 Lys Ala Phe Val Phe Gly Arg Lys Ser Arg Val Val Asp Leu Asn Leu
 225 230 235 240
 Leu Thr Glu Glu Val Arg Leu Tyr Ser Cys Thr Pro Arg Asn Phe Ser
 245 250 255
 Val Ser Ile Arg Glu Glu Leu Lys Arg Thr Asp Thr Ile Phe Trp Pro
 260 265 270
 Gly Cys Leu Leu Val Lys Arg Cys Gly Gly Asn Cys Ala Cys Cys Leu
 275 280 285
 His Asn Cys Asn Glu Cys Gln Cys Val Pro Ser Lys Val Thr Lys Lys
 290 295 300
 Tyr His Glu Val Leu Gln Leu Arg Pro Lys Thr Gly Val Arg Gly Leu
 305 310 315 320
 His Lys Ser Leu Thr Asp Val Ala Leu Glu His His Glu Glu Cys Asp
 325 330 335
 Cys Val Cys Arg Gly Ser Thr Gly Gly
 340 345

<210> 3
<211> 1035
<212> DNA
<213> Homo sapiens

<400> 3
atgaggcctct tcgggcttct cctgctgaca tctgccctgg ccggccagag acaggggact 60
caggcggaat ccaaccttag tagtaaattc cagtttcca gcaacaagga acagaacgga 120
gtacaagatc ctcagcatga gagaattatt actgtgtcta ctaatggaag tattcacagc 180
ccaaggtttc ctcataactta tccaagaaat acggtcttgg tatggagatt agtagcagta 240
gagaaaaatg tatggataca acttacgttt gatgaaagat ttgggcttga agacccagaa 300
gatgacatat gcaagtatga tttttagaa gttgaggaac ccagtgtatgg aactatatta 360
gggcgcctgg gtggcttgg tactgtacca ggaaaacaga tttctaaagg aaatcaaatt 420
aggataagat ttgtatctga tgaatatttt cttctgaac cagggttctg catccactac 480
aacattgtca tgccacaatt cacagaagct gtgagtcctt cagtgttacc cccttcagct 540
ttgcactgg acctgcttaa taatgtata actgcctta gtaccttgg agaccttatt 600
cgatatcttg aaccagagag atgcagttg gacttagaag atctatata tag gccaacttgg 660
caacttcttg gcaaggcttt tgttttggaa agaaaatcca gagtgggttga tctgaacctt 720
ctaacagagg aggttaagatt atacagctgc acacctcgta atttctcagt gtccataagg 780
gaagaactaa agagaaccga taccatttc tggccagggtt gtctcctgg taaacgctgt 840
ggtgggaact gtgcctgttgc tctccacaat tgcaatgtt gtcaatgtgt cccaaagcaaa 900
gttactaaaa aataaccacga ggtccttcag ttgagaccaa agaccgggtt caggggattt 960
cacaatcac tcaccgacgt ggccttggag caccatgagg agtgtgactg tgtgtgcaga 1020
gggagcacag gagga 1035

<210> 4
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 4
aaaatgtatg gatacaactt ac 22

<210> 5
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 5
gtttgatgaa agatttgggc ttg 23

<210> 6
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 6	
tttctaaagg aaatcaaatt ag	22
<210> 7	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: primer	
<400> 7	
gataagattt gatatctgatg	20
<210> 8	
<211> 17	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: primer	
<400> 8	
gatgtctcct ctttcag	17
<210> 9	
<211> 18	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: primer	
<400> 9	
gcacaactcc taattctg	18
<210> 10	
<211> 18	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: primer	
<400> 10	
agcacacctgat tccgttg	18
<210> 11	
<211> 20	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Description of Artificial Sequence: primer	
<400> 11	
tagtacatag aatgttctgg	20

<210> 12
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 12
aagagacata cttctgtac 19

<210> 13
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 13
ccaggtacaa taagtgaact g 21

<210> 14
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 14
ccttagaaa tctgtttcc tggcacag 28

<210> 15
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 15
ggaaaaatatt catcagatac aaatcttatac c 31

<210> 16
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 16
ggtccagtgg caaagctgaa gg 22

<210> 17

<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 17
ctgggttcaag atatcgaata aggtcttcc 29

<210> 18
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 18
tttgtttaaa ccttggaaaa ctgg 24

<210> 19
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 19
gtccaggttt tgctttgatc c 21

<210> 20
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 20
aattggatcc gagagtggtg gatctgaacc 30

<210> 21
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 21
aattggatcc ggaaagaaaa tccagagtgg 30

<210> 22
<211> 40
<212> DNA

<213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence:primer
 <400> 22
 ggttgaattc attatttttt agtaactttg cttgggacac 40

<210> 23
 <211> 31
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence:primer
 <400> 23
 aattgaattc attatcctcc tgtgctccct c 31

<210> 24
 <211> 60
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: primer
 <400> 24
 aattggatcc ggagtctcac catcaccacc atcatgaatc caacctgagt agtaaattcc 60

<210> 25
 <211> 34
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: primer
 <400> 25
 aattgaattc gctatcctcc tgtgctccct ctgc 34

<210> 26
 <211> 111
 <212> PRT
 <213> Homo sapiens
 <400> 26
 Gly Val Gln Asp Pro Gln His Glu Arg Ile Ile Thr Val Ser Thr Asn
 1 5 10 15

Gly Ser Ile His Ser Pro Arg Phe Pro His Thr Tyr Pro Arg Asn Thr
 20 25 30

Val Leu Val Trp Arg Leu Val Ala Val Glu Glu Asn Val Trp Ile Gln
 35 40 45

Leu Thr Phe Asp Glu Arg Phe Gly Leu Glu Asp Pro Glu Asp Asp Ile

50

55

60

Cys Lys Tyr Asp Phe Val Glu Val Glu Pro Ser Asp Gly Thr Ile
65 70 75 80

Leu Gly Arg Trp Cys Gly Ser Gly Thr Val Pro Gly Lys Gln Ile Ser
85 90 95

Lys Gly Asn Gln Ile Arg Ile Arg Phe Val Ser Asp Glu Tyr Phe
100 105 110

<210> 27

<211> 168

<212> PRT

<213> Homo sapiens

<400> 27

Met Ala Met Asp Ile Gly Ile Asn Ser Asp Pro Glu Ser His His His
1 5 10 15

His His His Glu Ser Asn Leu Ser Ser Lys Phe Gln Phe Ser Ser Asn
20 25 30

Lys Glu Gln Asn Gly Val Gln Asp Pro Gln His Glu Arg Ile Ile Thr
35 40 45

Val Ser Thr Asn Gly Ser Ile His Ser Pro Arg Phe Pro His Thr Tyr
50 55 60

Pro Arg Asn Thr Val Leu Val Trp Arg Leu Val Ala Val Glu Glu Asn
65 70 75 80

Val Trp Ile Gln Leu Thr Phe Asp Glu Arg Phe Gly Leu Glu Asp Pro
85 90 95

Glu Asp Asp Ile Cys Lys Tyr Asp Phe Val Glu Val Glu Pro Ser
100 105 110

Asp Gly Thr Ile Leu Gly Arg Trp Cys Gly Ser Gly Thr Val Pro Gly
115 120 125

Lys Gln Ile Ser Lys Gly Asn Gln Ile Arg Ile Arg Phe Val Ser Asp
130 135 140

Glu Tyr Phe Pro Ser Glu Pro Gly Phe Cys Ile His Tyr Asn Ile Val
145 150 155 160

Met Pro Gln Phe Thr Glu Ala Val
165

<210> 28

<211> 504

<212> DNA

<213> Homo sapiens

<400> 28
atggccatgg atatcgaaat taattcgat ccggagtc accatcacca ccatcatgaa 60
tccaacctga gtagtaaaatt ccagtttcc agcaacaagg aacagaacgg agtacaagat 120
cctcagcatg agagaattat tactgtgtct actaatggaa gtattcacag cccaaggttt 180
cctcatactt atccaagaaa tacggcttg gtatggagat tagtagcagt agagggaaat 240
gtatggatac aacttacgat tgatgaaaga tttgggcttg aagaccaga agatgacata 300
tgcaagtatg atttgtaga agttgagaa cccagtgtatg gaactatatt agggcgctgg 360
tgtggttctg gtactgtacc agggaaacag atttctaaag gaaatcaaata taggataaga 420
tttgttatctg atgaatattt tccttctgaa ccagggttct gcatccacta caacattgtc 480
atgccacaat tcacagaagc tgtg 504

<210> 29
<211> 132
<212> PRT
<213> Homo sapiens

<400> 29
Asp Leu Tyr Arg Pro Thr Trp Gln Leu Leu Gly Lys Ala Phe Val Phe
1 5 10 15

Gly Arg Lys Ser Arg Val Val Asp Leu Asn Leu Leu Thr Glu Glu Val
20 25 30

Arg Leu Tyr Ser Cys Thr Pro Arg Asn Phe Ser Val Ser Ile Arg Glu
35 40 45

Glu Leu Lys Arg Thr Asp Thr Ile Phe Trp Pro Gly Cys Leu Leu Val
50 55 60

Lys Arg Cys Gly Gly Asn Cys Ala Cys Cys Leu His Asn Cys Asn Glu
65 70 75 80

Cys Gln Cys Val Pro Ser Lys Val Thr Lys Lys Tyr His Glu Val Leu
85 90 95

Gln Leu Arg Pro Lys Thr Gly Val Arg Gly Leu His Lys Ser Leu Thr
100 105 110

Asp Val Ala Leu Glu His His Glu Glu Cys Asp Cys Val Cys Arg Gly
115 120 125

Ser Thr Gly Gly
130

<210> 30
<211> 300
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (41)

```

<220>
<221> n = a, t, g or c
<222> (293)

<400> 30
cacaatcac tcaccgacgt ggccctggag caccatgagg ngtgtactg tgtgtgcaga 60
gggagcacag gaggatagcc gcatcaccac cagcagctct tgcccagagc tgtgcagtgc 120
agtggctgat tctatttagag aacgtatgcg ttatctccat ccttaatctc agttgttgc 180
ttcaaggacc tttcatcttc aggattaca gtgcattctg aaagaggaga catcaaacag 240
aattaggagt tgtgcaacag ctctttgag aggaggctaa aggacaggag aanaggtctt 300

<210> 31
<211> 284
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Human EST

<400> 31
tgcagtgcag tggctgattc tattagagaa cgtatgcgtt atctccatcc ttaatctcag 60
ttgttgctt caaggacctt tcacatccag gatttacagt gcattctgaa agaggagaca 120
tcaaacagaa ttaggagttg tgaacacagct ctttgagag gaggcctaaa ggacaggaga 180
aaaggtcttc aatcggtggaa agaaaattaa atgttgttatt aaatagatca ccagctagtt 240
tcagagttac catgtacgta ttccactagc tgggttctgt attt 284

<210> 32
<211> 275
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 32
cacgaggtcc ttcagtttag accaaagacc ggtgtcaggg gattgcacaa atcactcacc 60
gacgtggccc tggagcacca tgaggagtgt gactgtgtgt gcagagggag cacaggggaa 120
tagccgcata accaccagca gctttgccc agagctgtgc agtgcagtgg ctgattctat 180
tagagaacgt atgcgttatac tccatccta atctcagttg tttgcttcaa ggaccttca 240
tcttcaggat ttacagtgca ttctgaaaga ggaga 275

<210> 33
<211> 278
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (248)

<400> 33
ggaggatagc cgccatcacca ccagcagctc ttgcccagag ctgtgcagtgc cagtggctga 60
ttctatttaga gaacgtatgc gttatctcca tccttaatctc cagttgttgc cttcaaggac 120

```

ctttcatctt caggattac agtgcattct gaagaggag acatcaaaca gaattaggag 180
ttgtgcaaca gcttttga gaggaggcct aaaggacagg agaaaaggtc ttcaatcg 240
gaaagaanat taaatgtgt attaaataga caccagct 278

<210> 34
<211> 275
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 34
ggaggatagc cgcatcacca ccagcagctc ttgccagag ctgtgcagtg cagtggctga 60
ttctattaga gaacgtatgc gttatctcca tccttaatct cagttgttg cttcaaggac 120
ctttcatctt caggattac atgcattctg aaagaggaga catcaaacag aattaggagt 180
tgtgcaacag ctctttgag aggaggccta aaggacagga gaaaaggctc tcaatcg 240
aaagaaaatt aaatgttgc ttaaatagat cacca 275

<210> 35
<211> 261
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 35
gagaaccgat accattttct ggccaggtt tctcctggtt aaacgctgtg gtggaaactg 60
tgcctgttgc ctccacaatt gcaatgaatg tcaatgtgtc ccaagcaaag ttactaaaaa 120
ataccacgag gtccttcagt tgagacaaa gaccgggtgc aggggattgc acaaatcact 180
caccgacgtg gccctggagc accatgagga gtgtgactgt gtgtgcagag ggagcacagg 240
aggatagccg catcaccacc a 261

<210> 36
<211> 279
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 36
agaaaatcca gagtggttga tctgaacctt ctaacagagg aggttaagatt atacagctgc 60
acacctcgta acttctcagt gtccataagg gaagaactaa agagaaccga taccattttc 120
tggccaggtt gtctcctgggt taaacgctgt ggtggaaact gtgcctgttgc tctccacaat 180
tgcaatgaat gtcaatgtgt cccaaagcaaa gttactaaaa aataccacga ggtcatttc 240
ttgagaccaa agaccgggtt caggggatttgc cacaaatca 279

<210> 37
<211> 262
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 37
 agggaaatcaa attaggataa gatttgtatc tgatgaatat ttcccttctg aaccttctaa 60
 cagaggaggt aagattatac agtgcacac ctcgtaactt ctcagtgtcc ataaggaaag 120
 aactaaagag aaccgatacc atttctggc caggttgtct cctggtaaa cgctgtggtg 180
 ggaactgtgc ctgttgtc tcacaattgc aatgaatgtc aatgtgtccc aagcaaagtt 240
 actaaaaaat accacgaggt cc 262

<210> 38
 <211> 289
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Human EST

<220>
 <221> n = a, t, g or c
 <222> (35)

<220>
 <221> n = a, t, g or c
 <222> (51)

<220>
 <221> n = a, t, g or c
 <222> (125)

<400> 38
 atttcatctt caggatttac agtgcattct gaaanaggag aaatcaaaca naattaggag 60
 ttgtgcaaca gctctttga gaggaggcct aaaggacagg agaaaaggtc ttcaatcg 120
 gaaanaaaat taaatgttgt attaaataga tcaccagcta gtttcagagt taccatgtac 180
 gtattccact agctgggttc tgtatccag ttcttcgat acggcttagg gtaatgtcag 240
 tacaggaaaa aaactgtgca agtgagcacc tgattccgtt gccttgctt 289

<210> 39
 <211> 245
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Human EST

<400> 39
 caaagttact aaaaaatacc acgaggtcct tcagttgaga ccaaagaccc gtgtcagggg 60
 attgcacaaa tcactcaccg acgtggccct ggagcaccat gaggagtgtg actgtgtgtg 120
 cagagggagc acaggaggat agccgcatca ccaccagcag ctcttgccca gagctgtgca 180
 gtgcagtggc tgattctatt agagaacgta tgcgttatct ccattctaa tctcagttgt 240
 ttgtct 245

<210> 40
 <211> 247
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Human EST

```

<220>
<221> n = a, t, g or c
<222> (2)

<220>
<221> n = a, t, g or c
<222> (86)

<220>
<221> n = a, t, g or c
<222> (191)

<400> 40
angagttgcc cagagctgtg cagtgcagtg gctgattcta ttagagaacg tatgcgttat 60
ctccatcctt aatctcagtt gtttgnntca aggacctttc atcttcagga tttacagtgc 120
attctgaaag aggagacatc aaacagaatt aggagttgtg caacagctct tttgagagga 180
ggcctaaagg ncaggagaaa aggtctcaa tcgtggaaag aaaattaaat gttgtattaa 240
atagatc 247

<210> 41
<211> 232
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 41
agggaaatcaa attaggataa gatttgtatc tgatgaatat tttccttctg aaccttctaa 60
cagaggaggt aagattatac agctgcacac ctcgtaactt ctcagtgtcc ataagggaag 120
aactaaagag aaccgatacc atttctggc caggttgtct cctggtaaa cgctgtggtg 180
ggaactgtgc ctgttgtctc cacaattgca atgaatgtca atgtgtccca ag 232

<210> 42
<211> 253
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 42
gtgcattctg aaagaggaga catcaaacag aattaggagt tgtgcaacag ctctttgag 60
aggaggccta aaggacagga gaaaaggctt tcaatcgtgg aaagaaaatt aaatgttgta 120
ttaaatagat caccagctag tttcagatc accatgtacg tattccacta gctgggtct 180
gtatccagt tcttcgata cggcttaggg taatgtcagt acaggaaaaa aactgtgcaa 240
gtgagcacct gat 253

<210> 43
<211> 265
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

```

```

<220>
<221> n = a, t, g or c
<222> (238)

<220>
<221> n = a, t, g or c
<222> (246)..(247)

<220>
<221> n = a, t, g or c
<222> (252)

<220>
<221> n = a, t, g or c
<222> (257)

<400> 43
tgcaacagct ctttgagag gaggcctaaa ggacaggaga aaaggtcttc aatcgtagaa 60
agaaaattaa atgtttagtt aaatagatca ccagcttagtt tcagagttac catgtacgta 120
ttccactagc tgggttctgt atttcagttc tttcgatacg gcttagggta atgtcagttac 180
aggaaaaaaaaa ctgtgcaagt gaggcacctga ttccgttgcc ttgcctaacc ctaaagcncc 240
atgtcnnggg cnaaaancga aaaat 265

<210> 44
<211> 291
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (61)

<220>
<221> n = a, t, g or c
<222> (66)

<220>
<221> n = a, t, g or c
<222> (88)

<220>
<221> n = a, t, g or c
<222> (141)

<220>
<221> n = a, t, g or c
<222> (155)

<220>
<221> n = a, t, g or c
<222> (172)

<220>
<221> n = a, t, g or c

```

```

<222> (177)

<220>
<221> n = a, t, g or c
<222> (227)

<220>
<221> n = a, t, g or c
<222> (229)

<220>
<221> n = a, t, g or c
<222> (274)

<400> 44
ccttaatctc agttgttgc ttcaaggacc tttcatcttc aggatttaca gtgcattctg 60
naagangaga catcaaacag aatttaggngt tgtgaaaaag ctcttttagg aggaggccta 120
aaggacagga gaaaaggctt ncaatcgtagg aaagnaaatt aaatgttgta tnaaatngat 180
caccagctag ttccagatcc accatgtacg tattccacta gctgggnncng tattcagtct 240
ttcggAACGG cttagggtaa tgtcagtaca ggaaaaaac tgtcagtga g 291

<210> 45
<211> 279
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (205)

<220>
<221> n = a, t, g or c
<222> (240)

<220>
<221> n = a, t, g or c
<222> (254)

<400> 45
attnaataga tcaccagcta gtttcagagt taccatgtac gtattccact agctgggttc 60
tgtatttcag ttctttcgat acggcttagg gtaatgttag tacaggaaaa aaactgtgca 120
agttagcacc tgattccgtt gccttggctt aactctaaag ctccatgtcc tgggcctaaa 180
atcgataaaa atctggattt tttntttttt ttttgcgcattt attcacatata gtaaaccagn 240
acattctatg tacnacaaaac ctgggtttta aaaaggaac 279

<210> 46
<211> 181
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

```

<400> 46
ggctagttc agagttacca tgtacgtatt ccactagctg ggttctgtat ttcagttctt 60
tcgatacggc ttaggtaat gtcagtgacag gaaaaaaaaact gtgcaagtga gcacctgatt 120
ccgtgcctt gcttaactct aaagctccat gtcctgggcc taaaatcgta taaaatctgg 180
a 181

<210> 47
<211> 184
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (54)

<400> 47
aatagatcac cagctagttt cagagttacc atgtacgtat tccactagct gggntctgta 60
tttcagttcc tttcgatacg gcttagggta atgtcagtgac agaaaaaaag ctgtgcaagt 120
gagcacctga ttccgttgcc ttgcttaact ctaaagctcc atgtcctggg cctaaaatcg 180
tata 184

<210> 48
<211> 290
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 48
aaaggaacta tgttgctatg aattaaactt gtgtcggtct gataggacag actggatttt 60
tcatatttct tattaaattt tctgcccattt agaagaagag aactacattt atggtttgg 120
agagataaac ctgaaaagaa gagtggcctt atcttcactt tatcgataag tcagtttattt 180
tgtttcattt tgtaatcttcc ttgcacatt ataactgttg gctttctaa 240
tcttgttaaa tatattctatttttaccaaaag gtatccaata ttctttttta 290

<210> 49
<211> 300
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (41)

<220>
<221> n = a, t, g or c
<222> (293)

```

<400> 49
cacaaatcac tcaccgacgt gcccctggag caccatgagg ngtgtactg tgtgtgcaga 60
gggagcacag gaggatagcc gcatcaccac cagcagctct tgcccagagc tgtcagtgc 120
agtggctgat tctatttagag aacgtatgcg ttatctccat ccttaatctc agttgttgc 180
ttcaaggacc tttcatcttc aggattaca gtgcattctg aaagaggaga catcaaacag 240
aattaggagt tgtgcaacag ctcttttagg aggaggctaa aggacaggag aanaggtctt 300

<210> 50
<211> 284
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 50
tgcagtgcag tggctgattc tattagagaa cgtatgcgtt atctccatcc ttaatctcag 60
ttgtttgctt caaggacctt tcatacttcag gatttacagt gcattctgaa agaggagaca 120
tcaaacagaa ttaggagttg tgcaacagct ctggagag gaggcctaaa ggacaggaga 180
aaaggtcttc aatcgtggaa agaaaaattaa atgttgatt aaatagatca ccagctagtt 240
tcagagttac catgtacgta ttccactagc tgggttctgt attt 284

<210> 51
<211> 301
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (47)

<220>
<221> n = a, t, g or c
<222> (253)

<400> 51
cttgttaaat atatctattt ttaccaaagg tatttaatat tcctttaat tgacaactta 60
gatcaactat ttttagcttg gtaaaatttt ctaaacacaa ttgttatagc cagaggaaca 120
aagatgatat aaaatattgt tgctctgaca aaaatacatg tatttcattc tcgtatggtg 180
ctagagtttag attaatctgc attttaaaaa actgaattgg aatagaattg gtaagttgca 240
aagacttttt ganaataatt aaattatcat atcttccatt cctgttattg ggggagaaaa 300
t 301

<210> 52
<211> 275
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 52
cacgaggtcc ttcagtttag accaaagacc ggtgtcaggg gattgcacaa atcactcacc 60
gacgtggccc tggagcacca tgaggagtgt gactgtgtgt gcagaggag cacaggggga 120

```

tagccgcac accaccagca gctttgccc agagctgtgc agtgcagtgg ctgattctat 180
tagagaacgt atgcgttatac tccatcctta atctcagttt ttgcattcaa ggaccttca 240
tcttcaggat ttacagtgc ttctgaaaga ggaga 275

<210> 53
<211> 288
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 53
ttaaaaagga actatgttgc tatgaattaa acttgttgc tgctgatagg acagactgga 60
ttttcatat ttcttattaa aatttctgcc atttagaaga agagaactac attcatggtt 120
tggaagagat aaacctgaaa agaagagtgg ccttatctt actttatcga taagttagtt 180
tatttgttc attgtgtaca ttttatatt ctcctttga cattataact gttggcttc 240
taatctgtta aatatatcta ttttaccaa aggtattaa tattctt 288

<210> 54
<211> 278
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (248)

<400> 54
ggaggatagc cgcatcacca ccagcagctc ttgcccagag ctgtgcagtgc cagtggctga 60
ttcttattaga gaacgtatgc gttatctcca tccttaatct cagttgtttt cttcaaggac 120
cttcatctt caggattac agtgcattct gaaagaggag acatcaaaca gaattaggag 180
ttgtgcaaca gcttttga gaggaggcct aaaggacagg agaaaaggc ttcataatcg 240
gaaagaanat taaatgttgc attaaataga caccagct 278

<210> 55
<211> 275
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 55
ggaggatagc cgcatcacca ccagcagctc ttgcccagag ctgtgcagtgc cagtggctga 60
ttcttattaga gaacgtatgc gttatctcca tccttaatct cagttgtttt cttcaaggac 120
cttcatctt caggattac atgcattctg aaagaggaga catcaaaca aattaggagt 180
tgtgcaacag ctctttgag aggaggccta aaggacaggaa gaaaaggc tcaatcg 240
aaagaaaatt aaatgttgc ttaaatagat cacca 275

<210> 56
<211> 261
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 56
gagaaccat accattttct ggccaggttg ttcctgggtt aaacgctgtg gtgggaactg 60
tgcctgttgt ctccacaatt gcaatgaatg tcaatgtgtc ccaagcaaag ttactaaaaaa 120
ataccacgag gtccttcagt tgagacaaa gaccgggtgtc aggggattgc acaaatcact 180
caccgacgtg gccctggagc accatgagga gtgtgactgt gtgtgcagag ggagcacagg 240
aggatagccg catcaccacc a 261

<210> 57
<211> 279
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 57
agaaaatcca gagtggtgga tctgaacctt ctaacagagg aggtaaaggatt atacagctgc 60
acacctcgta acttctcagt gtccataagg gaagaactaa agagaaccga taccattttc 120
tggccaggtt gtctcctgggt taaacgctgt ggtgggaact gtgcctgttg tctccacaat 180
tgcaatgaat gtcaatgtgt cccaaagcaaa gttactaaaaaa aataccacga ggtccttcag 240
ttgagaccaa agaccgggtgt caggggattt cacaatca 279

<210> 58
<211> 259
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 58
agatgatata aaatattgtt gctctgacaa aaatacatgt atttcattct cgtatggtg 60
tagagttaga ttaatctgca ttttaaaaaaa ctgaattgga atagaattgg taagttgcaa 120
agacttttg aaaataatta aattatcata tcttccattc ctgttattgg agatgaaaat 180
aaaaagacaac ttatgaaagt agacattcag atccagccat tactaaccta ttcccttttt 240
ggggaaatct gagcctagc 259

<210> 59
<211> 284
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 59
tttttaaaaaa ggaactatgt tgctatgaat taaacttgg tcgtgctgat aggacagact 60
ggattttca tatttcttat taaaatttct gccattnaga agaagagaac tacattcatg 120
gtttggaaaga gataaacctg aaaagaagag tggcctatct tcactttatc gataagtcc 180
tttatttggtt tcattgtgtt cattttata ttctcctttt acatataact gttggctttt 240
ctaattctgtt aaatatatct attttacca aaggtattta atat 284

<210> 60

<211> 262
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 60
aggaaatcaa attaggataa gatttgtatc tgatgaatat ttcccttctg aaccttctaa 60
cagaggaggt aagattatac agctgcacac ctcgtaactt ctcagtgtcc ataagggaaag 120
aactaaagag aaccgatacc atttctggc caggttgtct cctggttaaa cgctgtggtg 180
ggaactgtgc ctgttgtctc ccacaattgc aatgaatgtc aatgtgtccc aagcaaagtt 240
actaaaaaat accacgaggt cc 262

<210> 61
<211> 289
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (45)

<220>
<221> n = a, t, g or c
<222> (51)

<220>
<221> n = a, t, g or c
<222> (125)

<400> 61
atttcatctt caggatttac' agtgcattct gaaanaggag aaatcaaaca naattaggag 60
tttgtcaaca gctctttga gaggaggcct aaaggacagg agaaaaggtc ttcaatcg 120
gaaanaaaat taaatgtgt attaaataga tcaccagcta gtttcagagt taccatgtac 180
gtattccact agctgggttc tgtatccag ttctttcgat acggcttagg gtaatgtcag 240
tacaggaaaa aaactgtgca agtgagcacc tgattccggtt gccttgctt 289

<210> 62
<211> 251
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (10)

<220>
<221> n = a, t, g or c
<222> (246)

```

<400> 62
ttagcttgg  aaattttct  aaacacaatt  gttata gcca  gaggaacaaa  gatgatataa  60
aatattgtt  g ctcgacaaa  aatacatgta  tttcattctc  gtatggtgct  agagtttagat 120
taatctgc  at tttaaaaaac  tgaattggaa  tagaattgg  aagttgcaaa  gacttttga  180
aaataattaa  attatcatat  cttccattcc  tggttattgg  gatgaaaata  aaaagcaact 240
tatganagta  g                                              251

<210> 63
<211> 252
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (250)

<400> 63
ctttttatg  acaactt  tcaactat  tt  ttagcttgg  aaattttct  aaacacaatt  60
gttata gcca  gaggaacaaa  gatgatataa  aatattgtt  g ctcgacaaa  aatacatgta 120
tttcattctc  gtatggtgct  agagtttagat  taatctgc  at tttaaaaaac  tgaattggaa  180
tagaattgg  aagttgcaaa  ggcttttga  aaataattaa  attatcatat  cttccattcc  240
tggttattgg  gg                                              252

<210> 64
<211> 245
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 64
caaagtta  act  aaaaaatacc  acgagg  tcct  tcagttgaga  ccaaagac  gtgtcagg  60
attgcac  aaa  tcactcacc  acgtggcc  ggagcacc  gaggagtgt  actgtgtg  120
cagagg  gagc  acaggagg  agccgcat  ccaccac  ctcttgc  gagctgtg  180
gtgcagtgg  c  tgattct  att  agagaac  tgcgttat  ccatcctt  tctcagtt  240
ttgct                                              245

<210> 65
<211> 245
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 65
agataaac  ct  gaaaaga  gttggc  ttat  cttca  tt  tcgata  agtc  agtttatt  60
tttcattgt  g  tacat  ttta  tattct  cttt  ttgac  attat  aactgtt  ggc  ttttcta  atc  120
ttgtta  aata  tatctat  tttt  tacca  aaagg  attaat  att  cttttt  atg  acaac  tt  taga  180
tcaactat  tt  ttagctt  gg  aaatttt  ct  aaacaca  att  gttata  gcca  gaggaac  aaa  240
gatga                                              245

```

<210> 66
<211> 243
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 66
ctggattttt catatttctt attaaaattt ctgccattta gaagaagaga actacattca 60
tggtttggaa gagataaacc taaaaagaag agtggccta ttttcactt atcgataagt 120
cagtttattt gtttcattgt gtacattttt atattctcct ttgacatta taactgttgg 180
cttttctaat cttgttaat atatctattt ttaccaaagg tatttaatat tctttttat 240
gac 243

<210> 67
<211> 244
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (64)

<220>
<221> n = a, t, g or c
<222> (215)

<400> 67
gctcatattc acatatgtaa accagaacat tctatgtact acaaacctgg tttttaaaaa 60
gganctatgt tgctatgaat taaacttgtc tcgtgctgat aggacagact ggattttca 120
tatttcttat taaaatttct gccatttaga agaagagaac tacattcatg gtttggaga 180
gataaacctg aaaagaagag tggcttatc ttcantttat cgataagtca gtttatttgt 240
ttca 244

<210> 68
<211> 247
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (2)

<220>
<221> n = a, t, g or c
<222> (86)

<220>
<221> n = a, t, g or c

<222> (190)

<400> 68
angagttgcc cagagctgtg cagtgcagt gctgattcta ttagagaacg tatgcgttat 60
ctccatcctt aatctcagtt gtggnttcaggacccatc atcttcaggaa tttacagtgc 120
attctgaaag aggagacatc aaacagaatt aggagttgtg caacagctct tttgagagga 180
ggcctaaagg ncaggagaaa aggtctcaa tcgtggaaag aaaattaaat gttgtattaa 240
atagatc 247

<210> 69
<211> 233
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 69
aaagatgata taaaatattt ttgctctgac aaaaatacat gtatttcatt ctgcgtatgg 60
gctagagttt gattaatctg cattttaaaa aactgaattt gaatagaattt ggtaagttgc 120
aaagactttt tgaaaataat taaattatca tatcttccat tcctgttattt ggagatgaaa 180
ataaaaagca acttatgaaa gtagacattc agatccagcc attactaacc tat 233

<210> 70
<211> 232
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 70
aggaaaatcaa attaggataa gatttgatc tggatgatata tttccttctg aaccttctaa 60
cagaggaggt aagattatac agctgcacac ctcgtaactt ctcagtgtcc ataaggaaag 120
aactaaagag aaccgataacc attttctggc caggttgtct cttggtaaa cgctgtggtg 180
ggaactgtgc ctgttgtctc cacaattgca atgaatgtca atgtgtccca ag 232

<210> 71
<211> 253
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 71
gtgcattctg aaagaggaga catcaaacag aattaggagt tggcaacag ctctttgag 60
aggaggccta aaggacagga gaaaaggctt tcaatcgatgg aaaaattt aaatgttgc 120
ttaaatagat caccagctt tttcagatc accatgtacg tattccacta gctgggtct 180
gtatccatgt tcttcgata cggcttaggg taatgtcagt acaggaaaaa aactgtgcaa 240
gtgagcacct gat 253

<210> 72
<211> 233
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (48)

<400> 72
tgtacatttt tatattctcc ttttgacatt ataactgttg gctttcnaa tcttggtaaa 60
tatatctatt tttaccaaag gtatthaata ttctttta tgacaactta gatcaactat 120
tttagcttg gtaaatttt ctaaacacaa ttgttatagc cagaggaaca aagatgatat 180
aaaatattgt tgctctgaca aaaatacatg tatttcattc tcgtatggtg cta 233

<210> 73
<211> 250
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (53)

<400> 73
cacaattgtt atagccagag gaacaaagat gatataaaat attgttgctc tgnaaaaat 60
acatgtattt cattctcgta tgggtgctaga gtttagattaa tctgcatttt aaaaaactga 120
attggaatag aattggtaag ttgcaaagac ttttgaaaa taattaaatt atcatatctt 180
ccattcctgt tattggagat gaaaataaaa agcaacttat gaaaagtaaat tcagatccac 240
cattactaac 250

<210> 74
<211> 247
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 74
atttcattct cgtatggtgc tagagttaga ttaatctgca ttttaaaaaa ctgaattgga 60
atagaattgg taagttgcaa agacttttg aaaataatta aattatcata tcttccattc 120
ctgttattgg agatgaaaat aaaaagcaac ttatgaaagt agacattcag atccagccat 180
tactaaccta ttccctttt gggaaatct gagcctagct cagaaaaaca taaagcacct 240
tgaaaaaa 247

<210> 75
<211> 265
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c

```

<222> (238)

<220>
<221> n = a, t, g or c
<222> (246)..(247)

<220>
<221> n = a, t, g or c
<222> (252)

<220>
<221> n = a, t, g or c
<222> (257)

<400> 75
tgcaacagct ctttgagag gaggcctaaa ggacaggaga aaaggtcttc aatcgtaaa 60
agaaaaattaa atgttgtatt aaatagatca ccagcttagtt tcagagttac catgtacgta 120
ttccactagc tgggttctgt atttcagttc ttgcatacg gcttagggta atgtcagtac 180
aggaaaaaaaaa ctgtgcaagt gaggcacctga ttccgttgcc ttgcctaacc ctaaagcncc 240
atgtcnnggg cnaaaancga aaaat 265

<210> 76
<211> 251
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (134)

<220>
<221> n = a, t, g or c
<222> (157)

<400> 76
tttctaaaca caattgttat agccagagga acaaagatga tataaaatat tggtgctctg 60
acaaaaatac atgtatttca ttctcgatgt gtgcttagt tagattaatc tgcattttaa 120
aaaactgaat tggnatagaa ttggtaagtt gcaaagnctt tttgaaaata attaaattat 180
catatcttcc attcctgtta ttggaggatg gaaaataaaaa agcaacttat ggaaagttagg 240
acattcagat c 251

<210> 77
<211> 291
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (61)

```

```

<220>
<221> n = a, t, g or c
<222> (66)

<220>
<221> n = a, t, g or c
<222> (88)

<220>
<221> n = a, t, g or c
<222> (141)

<220>
<221> n = a, t, g or c
<222> (155)

<220>
<221> n = a, t, g or c
<222> (172)

<220>
<221> n = a, t, g or c
<222> (177)

<220>
<221> n = a, t, g or c
<222> (227)

<220>
<221> n = a, t, g or c
<222> (229)

<220>
<221> n = a, t, g or c
<222> (284)

<400> 77
ccttaatctc agttgttgc ttcaaggacc tttcatcttc aggatttaca gtgcattctg 60
naagangaga catcaaacag aattaggngt tgtcaaaag ctctttgag aggaggccta 120
aaggacagga gaaaaggctc ncaatcgtagg aaagnaaatt aaatgttgta tnaaatngat 180
caccagctag ttccagagtt accatgtacg tattccacta gctgggnncng tattcagtct 240
ttcggAACGGG cttagggtaa tgtcagtaca ggaaaaaac tgtgcagtga g 291

<210> 78
<211> 253
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (84)

```

```

<220>
<221> n = a, t, g or c
<222> (143)

<400> 78
gtactacaaa cctgggtttt aaaaaggaac tatgttgcta tgaattaaac ttgtgtccat 60
gctgatagga cagactggat tttncatatt tcttattaaa atttctgcc 120
gagaactaca ttcatggttt ggnagagata aacctgaaaa gaagagtggc cttatctca 180
ctttatcgat aagtca gtttca tgtgtacatt tttatattct cctttgacat 240
ataacgtggc ttt 253

<210> 79
<211> 204
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (190)

<400> 79
ttatattctc ctgtttgacat tataactgtt ggctttctta atcttgttaa atatatctat 60
ttttaccaaa ggtatttaat attctttttt atgacaactt agatcaacta ttttagctt 120
ggtaaatttt tctaaacaca attgttatag ccagaggaac aaagatgata taaaatattg 180
ttgctctgan aaaaatacat gtat 204

<210> 80
<211> 303
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (2)

<220>
<221> n = a, t, g or c
<222> (87)..(114)

<220>
<221> n = a, t, g or c
<222> (267)

<220>
<221> n = a, t, g or c
<222> (272)

<220>
<221> n = a, t, g or c

```

<222> (300)

<400> 80
anactgtgca agtgaggcacc tgattccgtt gccttgctta actctaaagc tccatgtcct 60
gggcctaaaa tcgtataaaa tctggannnn nnnnnnnnnn nnngctcat attcacatat 120
gtaaaccaga acattctatg tactacaaac ctggttta aaaaggaact atgttgctat 180
gaattaaact tgtgtcggtc tgataggaca gactggattt ttcatatttc ttattaaat 240
ttctgccatt agaagaagag aactacnttc anggtttgga agagataacc ctgaaaagan 300
ggg 303

<210> 81
<211> 228
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (112)

<400> 81
gctcatattc acatatgtaa accagaacat tctatgtact acaaacctgg tttttaaaaa 60
ggaactattt gctatgaatt aaacttgtt cgtgctgata ggacagactg gnttttcat 120
atttcttatt anaatttctg ccattagaag aagagaacta cattcatggt ttggaagaga 180
taaacctgaa aagaagagtg gcctattca ctatcgat aagtcatg 228

<210> 82
<211> 193
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 82
gctcatattc acatatgtaa accagaacat tctatgtact acaaacctgg tttttaaaaa 60
ggaactatgt tgctatgaat taaaacttgtt tcgtgctgat aggacagact ggattttca 120
tatttcttat taaaatttctt gccattttaga agaagagaac tacattcatg gtttggaaaga 180
gataaacctg aaa 193

<210> 83
<211> 282
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (42)

<220>
<221> n = a, t, g or c

<222> (94)

<220>

<221> n = a, t, g or c
<222> (235)

<220>

<221> n = a, t, g or c
<222> (269)

<400> 83

aaaaaaactga attggaatag aattggtaag ttgcaaagac tnttgaaaa taattaaatt 60
atcatatatctt ccattcctgt tattggagat gaanataaaa agcaacttat gaaagtagac 120
attcagatcc agccattact aacctattcc tttttgggg aaatctgagc ctagtcaga 180
aaaacataaaa gcacctgaa aaagacttgg cagcttcctg ataaagcgtg ctgtntgtca 240
gtaggaacac atcctattta ttgtgatgnt gtggtttatt at 282

<210> 84

<211> 279

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c
<222> (205)

<220>

<221> n = a, t, g or c
<222> (240)

<220>

<221> n = a, t, g or c
<222> (254)

<400> 84

attnaataga tcaccagcta gttcagagt taccatgtac gtattccact agctgggttc 60
tgtatttcag ttctttcgat acggcttagg gtaatgtcag tacaggaaaa aaactgtgca 120
agtgagcacc tgattccgtt gccttggctt aactctaaag ctccatgtcc tgggcctaaa 180
atcgatataaa atctggattt tttnttttt ttttgcgcattt attcacatata gtaaaccagn 240
acattctatg tacnacaaac ctggtttta aaaaggaac 279

<210> 85

<211> 181

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 85

ggctagtttc agagttacca tgtacgtatt ccactagctg ggttctgtat ttcagttctt 60
tcgatacggc ttagggtaat gtcaatgtcag gaaaaaaaaact gtcaatgtca gcacctgatt 120
ccgtgcctt gcttaactct aaagctccat gtcctggcc taaaatctgg 180

<210> 86
<211> 269
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 86
tggtaagttg caaagacttt ttgaaaataa ttaaattatc atatcttcca ttcctgttat 60
tggagatgaa aataaaaaagc aacttatgaa agtagacatt cagatccagc cattactaac 120
ctattccttt tttggggaaa tctgaggcta gctcagaaaa acataaagca cttgaaaaaa 180
gacttggcag ctgcgtgata aagcgtgctg tgctgtgcag taggaaacac atcctattta 240
ttgtgatgtt gtggttata tcctaaacc 269

<210> 87
<211> 184
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (54)

<400> 87
aatagatcac cagctagttt cagagttacc atgtacgtat tccactagct gggntctgta 60
tttcagttcc ttgcatacg gcttagggta atgtcagttt agaaaaaaag ctgtgcaagt 120
gagcacctga ttccgttgcc ttgcgttact ctaaagctcc atgtcctggg cctaaaatcg 180
tata 184

<210> 88
<211> 164
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (53)

<220>
<221> n = a, t, g or c
<222> (78)..(79)

<220>
<221> n = a, t, g or c
<222> (106)

<220>
<221> n = a, t, g or c

```

<222> (119)

<220>
<221> n = a, t, g or c
<222> (121)

<400> 88
agataaacct gaaaagaaga gtggccttat nttcacttta tcgataagtc agnttatttg 60
tttcattgtg tacatttnna tattctcctt ttgacattat aactgntggc ttttctaanc 120
ntgttaaata tatctatttt taccaaaggat attaaatatt ct 164

<210> 89
<211> 143
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<400> 89
tatggtgcta gagtagatt aatctgcatt taaaaaaact gaattggaat agaattggta 60
agtgc当地 acttttgaa aataattaaa ttatcatatc ttccattcct gttattggag 120
atgaaaataa aaagcaactt atg 143

<210> 90
<211> 164
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (35)

<220>
<221> n = a, t, g or c
<222> (51)

<220>
<221> n = a, t, g or c
<222> (132)

<220>
<221> n = a, t, g or c
<222> (141)

<220>
<221> n = a, t, g or c
<222> (145)..(146)

<400> 90
ttttttnttt tgctcatatt cacatatgta aaccngaaca ttctatgtac nacaaacctg 60
gtttttaaaa aggaactatg ttgctatgaa ttaaaacttgt gtcgtgctga taggacagac 120
tggattttcc anatttctta ntaannttc tgccatttag aaga 164

```

<210> 91
<211> 244
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (98)..(115)

<400> 91
gtacaggaaa aaaactgtgc aagtgagcac ctgattccgt tgccttgctt aactctaaag 60
ctccatgtcc tgggcctaaa atcgtataaa atctggannnnnnnnnnnnnnngctca 120
tattcacata tgtaaaccag aacattctat gtactacaaa cctggtttt aaaaaggaac 180
tatgttgcta tgaattaaac ttgtgtcgta ctgataggac agactggatt tttcatattt 240
ctta 244

<210> 92
<211> 254
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (20)

<220>
<221> n = a, t, g or c
<222> (26)

<220>
<221> n = a, t, g or c
<222> (52)

<220>
<221> n = a, t, g or c
<222> (61)

<220>
<221> n = a, t, g or c
<222> (144)

<220>
<221> n = a, t, g or c
<222> (225)

<220>
<221> n = a, t, g or c
<222> (236)

```

<220>
<221> n = a, t, g or c
<222> (240)

<220>
<221> n = a, t, g or c
<222> (242)

<400> 92
gcaaagactt tttganaatn attaanttat catatcttcc attcctgtta tnggagatga 60
naataaaaag caacttatga aagtagacat tcagatccag ccattactaa cctattcctt 120
ttttgggaa atctgaggcct agcnagaaa aacataaagc accttgaaaa agacttggca 180
gcttcctgat aaagcgtgct gtgctgtgca gtaggaacac atccnattt ttgtgntgtn 240
gnggttttat gatc 254

<210> 93
<211> 243
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (103)..(120)

<400> 93
tgtcagtaca ggaaaaaaaaac tgtgcaagtg agcacctgat tccgttgcct tgcttaactc 60
taaagctcca tgtcctggc ctaaaatcgat ataaaatctg gannnnnnnn nnnnnnnnnn 120
gctcatattc acatatgtaa accagaacat tctatgtact acaaacctgg tttttaaaaaa 180
ggaactatgt tgctatgaat taaaacttgg tcatgctgat aggacagact ggattttca 240
tat 243

<210> 94
<211> 244
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (136)

<400> 94
aattatcata tcttccattc ctgttattgg agatgnaat aaaaagcaac ttatgaaagt 60
agacattcag atccagccat tactaaccta ttcctttt gggaaatct gagcctagct 120
cagaaaaaca taaagcacct tgaaaaagac tgtcagctc ctgataaagc gtgctgtgct 180
gtgcagtagg aacacatcct atttattgtg atgttggtt tttattatct taaactcggtt 240
ccat 244

<210> 95
<211> 152

```

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Human EST

<220>
<221> n = a, t, g or c
<222> (2)

<220>
<221> n = a, t, g or c
<222> (16)

<220>
<221> n = a, t, g or c
<222> (33)

<220>
<221> n = a, t, g or c
<222> (34)

<220>
<221> n = a, t, g or c
<222> (82)

<220>
<221> n = a, t, g or c
<222> (97)

<220>
<221> n = a, t, g or c
<222> (108)

<220>
<221> n = a, t, g or c
<222> (125)

<220>
<221> n = a, t, g or c
<222> (127)

<220>
<221> n = a, t, g or c
<222> (137)

<400> 95
anagatgata taaaanattg ttgctctgac aannatacat gtatttcatt ctcgtatgg 60
gctagagttt gattaatctg cttttaaaaa aactganttg gaatagantt ggtaagttgc 120
aaagnncnttt gaaaatnattt aagtttatcag at 152

<210> 96
<211> 292
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<400> 96
ttccattcct gttattggag atgaaaataa aaagcaactt atgaaaagtag acattcagat 60
ccagccatta ctaaccttatt ccttttttg ggaaatctga gcctagctca gaaaaacata 120
aagcacctt aaaaagactt ggcagcttcc tgataaaagcg tgctgtgctg tgcagtagga 180
acacatccta tttattgtga tggatatttt ttattatcta aactctgttc catacacttg 240
tataaataca tggatatttt tatgtacaga agtatgtc ttaaccagt ca 292

<210> 97

<211> 308

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Human EST

<220>

<221> n = a, t, g or c

<222> (46)

<400> 97

cttccattcc ttttatttggatgaaaataaaaagcaactt tatganagta gacattcaga 60
tccagccatt actaaccttat tccttttttg gggaaatctg agcctagctc agaaaaaacat 120
aaagcacctt gaaaaagact tggcagcttc ctgataaaagc gtgctgtgct gtgcagtagg 180
aacacatcctt atttattgtg atgttgggttttattatcta aactctgtt tccatacact 240
tgtataaaata catggatatttttattatcta aactctgtt tccatacact 300
gtacacctgg 308